Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	136.271	132.706	0.000	132.706	121.764	106.408	158.135	150.862	Continuing	Continuing
67A030: Infrastructure	0.000	29.469	35.348	0.000	35.348	32.689	34.465	36.347	36.322	Continuing	Continuing
67A031: Mission Applications	0.000	87.520	79.169	0.000	79.169	73.684	46.842	91.028	85.562	Continuing	Continuing
67A032: Command & Control	0.000	8.085	9.907	0.000	9.907	11.851	20.679	26.523	26.506	Continuing	Continuing
67A033: Data Integration	0.000	11.197	8.282	0.000	8.282	3.540	4.422	4.237	2.472	Continuing	Continuing

Note

FY10 National Defense Authorization Act added Program Element funds to continue the Karnac study (a joint Air Force and Department of Energy National Laboratory effort) to improve the Joint Space Operations Center (JSpOC) capabilities (funds added to the Data Integration project line (A033)).

A. Mission Description and Budget Item Justification

Overall, the program will continue risk reduction engineering and focus on incremental releases (Information Technology BOX construct) to deploy a service-oriented architecture environment and tools to progressively advance operational capabilities toward an integrated JSpOC Mission System (JMS). This program will produce a net-centric collaborative environment, enhance and modernize space surveillance capabilities, create decision relevant views of the space environment, and enable efficient distribution of data across the space surveillance network.

JMS is responsible for Space Situational Awareness (SSA) and command & control (C2) of space forces. SSA includes the knowledge of all aspects of space related to operations to thoroughly assess threats to U.S. space assets and develop options, military and diplomatic to counter them and to establish contingency plans to ensure U.S. forces can maintain access to space assets. JMS will access intelligence on adversary space operations, process surveillance of all space objects and activities, maintain detailed reconnaissance of specific space assets; fuse space environmental data, maintain awareness of cooperative space assets; and allow the Joint Functional Component Command for Space (JFCC-Space) to conduct space forces integrated command, control, communications, processing, analysis, dissemination, and archiving activities.

Near-term focus is to provide a sustainable net-centric environment with a highly accurate, responsive, and robust SSA system migration from the rapidly aging, and sustainment-challenged Space Defense Operations Center (SPADOC) system (SPADOC design end of life was 2002). JMS will provide integrated space knowledge/information for the Command, JFCC-Space to plan, direct, coordinate, and control operations of assigned forces. JMS will provide the ability to: monitor status, activities, and environment for assigned/attached space forces; assess how space forces support the battle space, provide impacts of changes to force status, and

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

PE 0305614F: JSpOC Mission System

impacts of enemy forces on space assets; plan space operations to support theater and national operations; and execute Joint space tasking, track task performance, adapt tasking to changing situations, and conduct technology forecasting for emerging needs. JMS will also develop improved information capabilities for integration across SSA sensors, including exposing data when required, though data exposure will be accomplished via the Net Centric Sensors and Data Sources effort (BPAC A012) in the SSA Systems PE (0604425F).

These efforts are in Budget Activity 7, Operational System Development, because they develop new JMS capabilities

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	0.000	131.271	0.000	0.000	0.000
Current President's Budget	0.000	136.271	132.706	0.000	132.706
Total Adjustments	0.000	5.000	132.706	0.000	132.706
 Congressional General Reductions 		0.000			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	0.000	0.000			
 SBIR/STTR Transfer 	0.000	0.000			
 Other Adjustments 	0.000	5.000	132.706	0.000	132.706

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 67A033: Data Integration

Congressional Add: continues KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulation.

Congressional Add Subtotals for Project: 67A033

Congressional Add Totals for all Projects

1 1 2003	1 1 2010
0.000	5.000
0.000	5.000
0.000	5.000

EV 2010

EV 2009

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Ford	ce	DATE : February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System	
Change Summary Explanation FY10: +5.0M Congressional Add to continue project KARN/ modeling and simulation.	AC study to improve JSpOC capabilities to include i	non-traditional data and three dimensional

DATE: February 2010

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				I OMENCLA 4F: <i>JSpOC N</i>		em	PROJECT 67A030: Infrastructure					
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	e OCO Total FY 2012 FY 2013				FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
67A030: Infrastructure	0.000	29.469	35.348	0.000	35.348	32.689	34.465	36.347	36.322	Continuing	Continuing	

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A. Mission Description and Budget Item Justification

Quantity of RDT&E Articles

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

Infrastructure will provide a services-oriented architecture (SOA) net-centric collaborative information environment at the SAP/SAR, TS/SCI, Secret, and Unclassified levels. Efforts incorporate net-centric enterprise services and integrate incremental space mission applications services. Priority is migration off the legacy SPADOC hardware and services into a sustainable infrastructure. Effort integrates components of SSA mission applications and C2 capabilities into the JSpOC to create timely, actionable knowledge necessary for maintaining space superiority and exercising command and control of space forces.

These efforts are in Budget Activity 7, Operational System Development

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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
MAJOR THRUST: Pursue and integrate a collaborative net-centric, SOA information environment	0.000	29.469	35.348	0.000	35.348	
FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: Develop, field, test, and accredit SOA infrastructure enclaves at SCI and Secret security levels. User Defined Operational Picture implementation. Initial core services like registry/user profiles management, collaboration expansion. Information assurance accreditation. JSpOC Integration of warfighter capabilities. System engineering integration, planning, coordination, and execution.						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

PROJECT

67A030: Infrastructure

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: Continues the incorporation, fielding, and accreditation of new mission services, core services, and expands the SOA infrastructure enclaves to include releaseable information and Unclassified security levels. Continues integration and systems engineering, support, and testing of existing and updated baseline system FY 2011 OCO Plans: In FY 2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	0.000	29.469	35.348	0.000	35.348

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
PE Not Provided (5196):	0.000	0.000	0.000	0.000	0.000	5.874	1.563	1.361	6.304	0.000	0.000
Otto an Dua summer and Air Fame											

Other Procurement, Air Force (PE 0305614F, JSpOC Mission System)

D. Acquisition Strategy

Ongoing activities utilize existing risk reduction engineering and study efforts to rapidly deploy a SOA environment and tools to progressively advance operational capabilities toward an integrated JMS.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0305614F: JSpOC Mission System

67A030: Infrastructure

BA 7: Operational Systems Development

Product Development (\$ in Millions)

				FY 2	010	FY 2 Ba	2011 se	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration	TBD/TBD	TBD TBD	0.000	5.505	Mar 2010	11.670	Jan 2010	0.000		11.670	Continuing	Continuing	Continuing
Infrastructure Design & Development	C/Various	Various Various	0.000	20.477	Jan 2010	20.056	Dec 2010	0.000		20.056	Continuing	Continuing	Continuing
		Subtotal	0.000	25.982		31.726		0.000		31.726			

Remarks

Support (\$ in Millions)

				FY 2	2010	FY 2 Ba	-	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various/ Various	Electronic Systems Center Hanscom AFB, MA	0.000	0.813	Nov 2009	0.838	Nov 2010	0.000		0.838	Continuing	Continuing	Continuing
Development, Review and Management	SS/FP	FFRDC Various	0.000	1.600	Nov 2009	1.648	Nov 2010	0.000		1.648	Continuing	Continuing	Continuing
Development, Review and Management (1)	C/FP	Various Various	0.000	1.074	Nov 2009	1.136	Nov 2010	0.000		1.136	Continuing	Continuing	Continuing
		Subtotal	0.000	3.487		3.622		0.000		3.622			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

PROJECT

67A030: Infrastructure

	Total Prior Years Cost	FY 2010	FY 2 Ba	2011 se	FY 2	-	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	29.469	35.348		0.000		35.348			

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

PROJECT

67A030: Infrastructure



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JSpOC Mission System PE 0305614F Project A030 Infrastructure

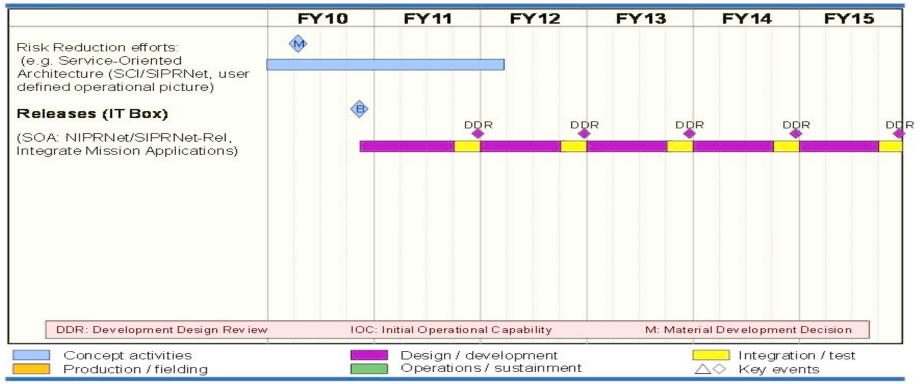


Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

PROJECT R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force PE 0305614F: JSpOC Mission System BA 7: Operational Systems Development

67A030: Infrastructure

Schedule Details

	St	art	End		
Event	Quarter	Year	Quarter	Year	
Risk Reduction	1	2010	4	2011	
IT Box Release	4	2010	4	2011	

DATE: February 2010

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85.562 Continuing Continuing

APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 7: Operational Systems Develop	& Evaluatio	n, Air Force			IOMENCLA 4F: <i>JSpOC I</i>	TURE Mission Syst	em	PROJECT 67A031: <i>Mi</i>	ission Applic	ations	
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost

79.169

0

73.684

0

46.842

0

91.028

0

0.000

0

A. Mission Description and Budget Item Justification

67A031: Mission Applications

Quantity of RDT&E Articles

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

Mission applications will provide space services to enhancing the accuracy, sustainability, and responsiveness of space surveillance capabilities from the legacy SPADOC SSA functions onto a net-centric enterprise enabling automated, real-time correlation, integration, distribution of data, and provide the knowledge environment necessary to enable the Commander JFCC Space rapid, responsive decisions for the protection of space assets from proliferating threats (adversary as well as orbiting debris). The system will provide a high accuracy space catalog (knowledge of space objects), increased observation verification and capabilities, and improved event processing. Research, design, and development will provide SSA space catalog applications, services, space surveillance observation processing, and sensor tasking. Funding includes technical studies, systems engineering, and integration.

These efforts are in Budget Activity 7, Operational System Development

0.000

0

87.520

0

79.169

0

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: services/mission applications to conduct space control/situational awareness.	0.000	87.520	79.169	0.000	79.169
FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: develop, field, and test mission services like sensor management and blue force status. Initiates development of satellite positional database (i.e. high accuracy catalog). Risk reduction efforts like commercial & foreign entities spacecraft information, space environmental effects, SSA web services, space C2 execution/tasking tools.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

PROJECT

67A031: Mission Applications

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: Continues development of mission high accuracy catalog and commercial and foreign entities services like maneuver processing, conjunction analysis/collision prediction, high accuracy element set generation, sensor tasking processing. Investigates, prepares, and initiates decommission of legacy system functionality.					
FY 2011 OCO Plans:					
In FY 2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	0.000	87.520	79.169	0.000	79.169

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
PE Not Provided (5432):	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Other Presurement Air Force											

Other Procurement, Air Force (PE 0305614F, JSpOC Mission System)

D. Acquisition Strategy

Continues existing SSA risk reduction efforts and competitively selected system developer and integrator. Rapid release prototyping approach to progressively advance capabilities towards integrated SSA envisioned by existing architectures and roadmaps.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

PROJECT

67A031: Mission Applications

Product Development (\$ in Millions)

•	• •	,											
				FY 2	010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Positional Mission Apps Design and Develop	TBD/TBD	TBD TBD	0.000	25.000	Jun 2010	31.054	Nov 2010	0.000		31.054	Continuing	Continuing	Continuing
Mission Apps Design and Develop	C/TBD	Various Various	0.000	43.262	Jan 2010	25.229	Dec 2010	0.000		25.229	Continuing	Continuing	Continuing
SSA Risk Reduction	TBD/TBD	TBD TBD	0.000	6.650	Apr 2010	9.900	Jan 2011	0.000		9.900	Continuing	Continuing	Continuing
	-	Subtotal	0.000	74.912		66.183		0.000		66.183			

Remarks

Support (\$ in Millions)

	,					FY 2	011	FY 2	2011	FY 2011			
				FY 2	2010	Ва	se	oc	O	Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various/ Various	Electronic Systems Center Hanscom AFB, MA	0.000	2.102	Nov 2009	2.165	Nov 2010	0.000		2.165	Continuing	Continuing	0.000
Development, Review & Management	SS/FP	FFRDC Various	0.000	3.083	Nov 2009	3.175	Nov 2010	0.000		3.175	Continuing	Continuing	0.000
Development, Review & Management (1)	C/FP	Various Various	0.000	7.423	Nov 2009	7.646	Nov 2010	0.000		7.646	Continuing	Continuing	0.000
		Subtotal	0.000	12.608		12.986		0.000		12.986			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0305614F: JSpOC Mission System

67A031: Mission Applications

Support (\$ in Millions)

				FY	2010		2011 ise		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

	Total Prior Years Cost	FY 2	2010	FY :	2011 Ise	FY 2011 OCO	FY 2011 Total	Cost To	Total Cost	Target Value of Contract
							1000	.		
Project Cost Totals	0.000	87.520		79.169		0.000	79.169			

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

PROJECT

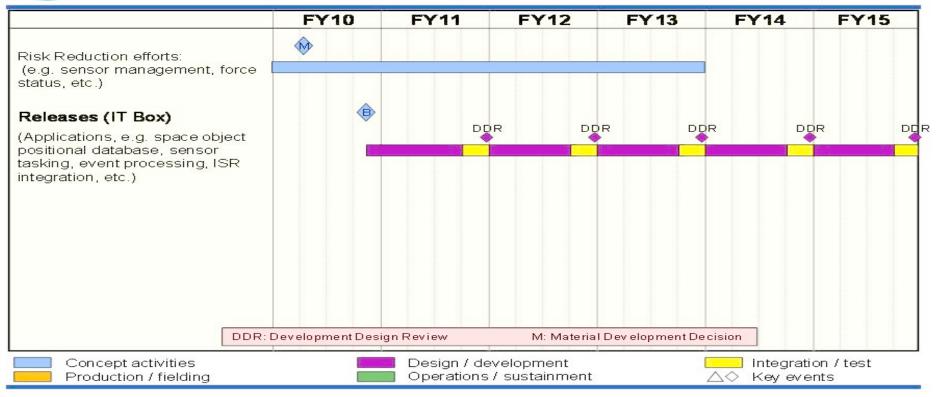
67A031: Mission Applications



DRAFT

JSpOC Mission System

PE 0305614F Project A031 Mission Applications



R-1 Line Item #213 Page 14 of 28

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

PROJECT R-1 ITEM NOMENCLATURE 3600: Research, Development, Test & Evaluation, Air Force PE 0305614F: JSpOC Mission System 67A031: Mission Applications

BA 7: Operational Systems Development

Schedule Details

	Start		End		
Event	Quarter	Year	Quarter	Year	
Risk Reduction	1	2010	4	2011	
IT Box Releases	4	2010	4	2011	

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

FY 2011

R-1 ITEM NOMENCLATURE
PE 0305614F: JSpOC Mission System
67A032: Command & Control
FY 2011
FY 2011
FY 2011

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
67A032: Command & Control	0.000	8.085	9.907	0.000	9.907	11.851	20.679	26.523	26.506	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

Command & Control (C2) effort will design, develop and integrate functions to create, visualize, and share decision-relevant views of space operational environment at all echelons. Functions include Space Situational Awareness and attack assessment data to provide an integrated space information environment for the JSpOC C2 node and improve deliberate attack warning/reporting, planning, tasking, course of action (COA) development capability, and situation assessment.

These efforts are in Budget Activity 7, Operational System Development

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: Risk reduction/prototype development of space C2 services	0.000	8.085	9.907	0.000	9.907
FY 2009 Accomplishments: In FY 2009: N/A					
FY 2010 Plans: In FY 2010: explore JSpOC C2 human factors visualization technologies and space control efforts; e.g.,master space plan, joing space tasking order, space order of battle					
FY 2011 Base Plans: In FY 2011: Continues space control services like courses of action preparation and C2 presentation					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE PROJECT 3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

PE 0305614F: JSpOC Mission System

67A032: Command & Control

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals	0.000	8.085	9.907	0.000	9.907

C. Other Program Funding Summary (\$ in Millions)

			<u>FY 2011</u>	<u>FY 2011</u>	<u>FY 2011</u>					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• PE Not Provided (5685): N/A	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

D. Acquisition Strategy

Risk reduction technology development/operational pilots to decrease uncertainties then employ competitively selected developer to produce and field incremental capabilities.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0305614F: JSpOC Mission System

67A032: Command & Control

Product Development (\$ in Millions)

				FY 2010		FY 2 Ba	-	FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
C2 Risk Reduction	TBD/TBD	TBD TBD	0.000	7.400	Mar 2010	9.016	Dec 2010	0.000		9.016	Continuing	Continuing	Continuing
		Subtotal	0.000	7.400		9.016		0.000		9.016			

Remarks

Support (\$ in Millions)

			FY 2	2010	FY 2 Ba	-	FY 2		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various/ Various	Electronic Systems Center Hanscom AFB, MA	0.000	0.685	Nov 2009	0.891	Nov 2010	0.000		0.891	Continuing	Continuing	Continuing
		Subtotal	0.000	0.685		0.891		0.000		0.891			

Remarks

	Total Prior Years Cost	FY 2	2010		2011 se	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	8.085		9.907		0.000	9.907			

			UNCL	ASSIFIED				
Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development Total Prior Years Cost may include only FY 2009 data. Remarks Total Prior Years Cost may include only FY 2009 data.	ary 2010							
3600: Research, Development, Test & Evalu-	ation, Air Force					ommand & Co	ntrol	
		FY 20	10				Total Cost	Target Value of Contract

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

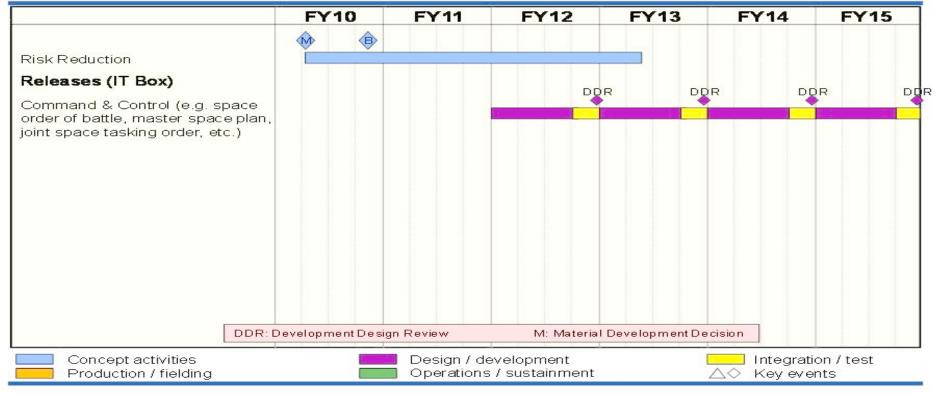
PROJECT

67A032: Command & Control



DRAFT

JSpOC Mission System PE 0305614F Project A032 Command & Control



UNCLASSIFIED

R-1 Line Item #213 Page 20 of 28

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

PROJECT

67A032: Command & Control

Schedule Details

	St	art	End		
Event	Quarter	Year	Quarter	Year	
Risk Reduction	2	2010	4	2011	

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force PE 0305614F: JSpOC Mission System 67A033: Data Integration

BA 7: Operational Systems Development

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
67A033: Data Integration	0.000	11.197	8.282	0.000	8.282	3.540	4.422	4.237	2.472	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10, a Congressional Add of \$3.2M for "COTS Technology for Space Command and Control" was added into the AOC-WS PE (0207410F), Space C2 Ops BPAC (674372) by error and will be moved into the Data Integration BPAC (67A033) of the JMS PE (0305614F)

A. Mission Description and Budget Item Justification

The Data Integration Risk reduction effort mitigates JMS risk for the integration of legacy sensors into a net-centric based enterprise enabling distribution of data obtained across traditional sensors within the space surveillance network and non-traditional sensors and data sources critical to the Joint Space Operations Center (JSpOC) mission. This effort will define and implement the operational concept, technical architecture, and support concept to provide data to enable rapid, responsive decisions by the Commander, US Strategic Command's Joint Functional Component Commander for Space and other space capability users to ensure protection of US space assets from proliferating adversary threats. This effort is vital to JSpOC modernization.

These efforts are in Budget Activity 7, Operational System Development, because they develop capabilities for better integration of SSA data or develop architectures guiding associated technical and budgetary planning.

B. Accomplishments/Planned Program (\$ in Millions)

			FY 2011	FY 2011	FY 2011
	FY 2009	FY 2010	Base	oco	Total
MAJOR THRUST: risk reduction integration of legacy/non-traditional sensors into net-centric enterprise	0.000	6.197	8.282	0.000	8.282
FY 2009 Accomplishments: In FY 2009: N/A					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force	DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305614F: JSpOC Mission System	PROJECT 67A033: Da	ata Integration

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY 2010: engineering for common logical data model, space surveillance observations interface, and non-traditional sensors interface					
FY 2011 Base Plans: In FY 2011: continues data modeling and management interfaces to include Space Fence program and net-centric satellite observations for high-accuracy catalog processing					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	0.000	6.197	8.282	0.000	8.282

	FY 2009	FY 2010
Congressional Add: continues KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulation.	0.000	5.000
FY 2009 Accomplishments: In FY 2009: N/A		
FY 2010 Plans: In FY 2010: KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulation.		
Congressional Adds Subtotals	0.000	5.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force

PE 0305614F: JSpOC Mission System

67A033: Data Integration

C. Other Program Funding Summary (\$ in Millions)

FY 2011 FY 2011 FY 2011 Cost To

Line Item • PE Not Provided (5897): N/A FY 2009 FY 2010 0.000 0.000

Base 0.000

OCO 0.000

Total 0.000

FY 2012 0.000

FY 2013 FY 2014 0.000 0.000

0.000

FY 2015 Complete Total Cost

0.000 0.000

D. Acquisition Strategy

Data integration focus is on supporting the migration of the space surveillance network sensors and non-traditional sensors and data sources to a net-centric architecture.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development

PE 0305614F: JSpOC Mission System

67A033: Data Integration

Product Development (\$ in Millions)

•	٠.	,											
			FY 2	010	FY 2 Ba	2011 Ise	FY 2		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Concept Definition Research/Analysis	Various/ Various	Various Various	0.000	2.600	Feb 2010	2.060	Nov 2010	0.000		2.060	Continuing	Continuing	Continuing
Sensor & Data Source Integration	Various/ Various	Various Various	0.000	2.225	Mar 2010	4.559	Dec 2010	0.000		4.559	Continuing	Continuing	Continuing
		Subtotal	0.000	4.825		6.619		0.000		6.619			

Remarks

Support (\$ in Millions)

Capport (4 m mmor	,												
				FY 2	2010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office/Related Support	Various/ Various	Various Various	0.000	1.372	Apr 2010	1.663	Nov 2010	0.000		1.663	Continuing	Continuing	Continuing
		Subtotal	0.000	1.372		1.663		0.000		1.663			

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development

PE 0305614F: JSpOC Mission System

67A033: Data Integration

Test and Evaluation (\$ in Millions)

			FY 2010			FY 2011 Base		FY 2011 OCO					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
KARNAC Study	TBD/TBD	TBD TBD	0.000	5.000	Jan 2010	0.000	Oct 2010	0.000		0.000	0.000	5.000	0.000
		Subtotal	0.000	5.000		0.000		0.000		0.000	0.000	5.000	0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 20 Base		FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	11.197	8.282	0.	000	8.282			

Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305614F: JSpOC Mission System

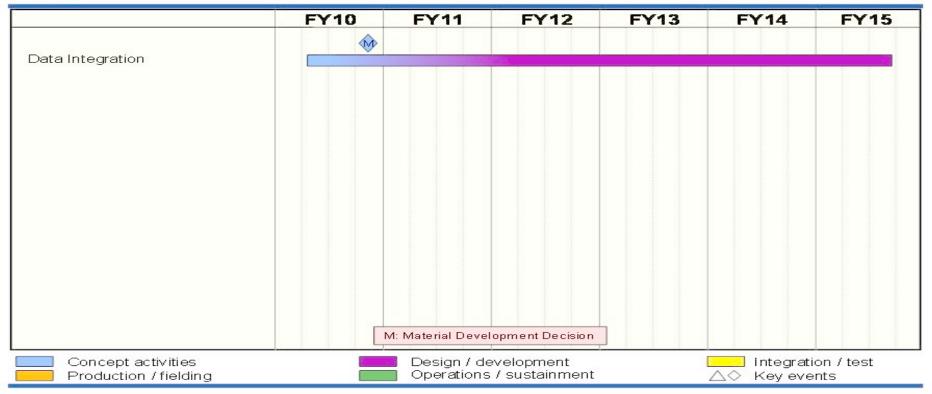
PROJECT

67A033: Data Integration



DRAFT

JSpOC Mission System PE 0305614F Project A033 Data Integration



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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

PE 0305614F: JSpOC Mission System
67A033: Data Integration

Schedule Details

	St	art	End		
Event	Quarter	Year	Quarter	Year	
Data Integration	2	2010	4	2011	